

REMARKS

Claims 1-3 and 5-12 have been amended to delete the term “pivotably.” Claim 1 has been further amended to incorporate the subject matter of Claim 4 and to delete the phrase “a pair of.” Claim 4 has been canceled. Claim 5 has been further amended to correct an antecedent basis issue and to recite that the carrier is returned to an original position by reverse movement of the roller. Support for amended Claim 5 can be found at for example, paragraph [0067]. Claim 6 has been further amended to correct an antecedent basis issue. Claim 7 has been further amended to incorporate subject matter from Claim 1 and to more clearly define the device for implementing a method for driving a carriage. Claims 11 and 12 have been further amended to more clearly define the subject matter which Applicants regard as the invention. Upon entry of this Amendment, which is respectfully requested, Claims 1-3 and 5-12 will be pending.

Response to Claim Rejections Under §112

Claims 1-12 have been rejected under 35 U.S.C. §112, second paragraph, as assertedly being indefinite.

(a) The Examiner asserts that it is unclear what is meant by the recitation, “pivotably driving,” in the first line of each of Claims 1-12.

Claims 1-12 have been amended to delete the term “pivotably” from the claim language. Accordingly, withdrawal of this aspect of the rejection is respectfully requested.

(b) The Examiner asserts that reference to the endless path consisting of “a pair of inner and outer endless rails” “would seem to require a pair of inner rails and a pair of outer rails.”

Claim 1 has been amended to delete “a pair of,” thereby clarifying that the endless path consists of one (1) inner rail and one (1) outer rail. Accordingly, withdrawal of this aspect of the rejection is respectfully requested.

(c) The Examiner asserts that the phrase “as well as is disengaged” in the last line of Claim 4 is grammatically awkward and confusing.

Claim 4 has been amended to more clearly define the subject matter which Applicants regard as the invention. Accordingly, withdrawal of this aspect of the rejection is respectfully requested.

(d) According to the Examiner, it is not clear what direction is “outward” in Claim 5.

Claim 5 has been amended to recite that the carrier is returned to the original position by reverse movement of the roller. Accordingly, withdrawal of this aspect of the rejection is respectfully requested.

(e) According to the Examiner, there is no antecedent basis for “the original position” in Claim 5.

Claim 5 has been amended to correct the antecedent basis issue. Accordingly, withdrawal of this aspect of the rejection is respectfully requested.

(f) According to the Examiner there no antecedent basis for “the engagement/disengagement of the carriage with the carrier” in Claim 6.

Claim 6 has been amended to correct the antecedent basis issue. Accordingly, withdrawal of this aspect of the rejection is respectfully requested.

(g) The Examiner asserts that Claim 7 is directed to a device for implementing the Claim 1 method but “the claim does not clearly define the scope of the claimed device.”

Claim 7 has been amended to incorporate subject matter from Claim 1 and to more clearly define the device for implementing a method for driving a carriage. Accordingly, withdrawal of this aspect of the rejection is respectfully requested.

(h) The Examiner asserts that the last two lines of Claim 11 are indefinite and confusing, the phrase “each of the positions backside of the entrance and front of the exit” being awkward and confusing.

Claim 11 has been amended to more clearly define the subject matter which Applicants regard as the invention. Accordingly, withdrawal of this aspect of the rejection is respectfully requested.

(i) The Examiner asserts that Claim 12 is unclear because it “refers to some of the features defined in Claim 1 but does not indicate whether it is in reference to (and thus further defining) the same features or is introducing new features.”

Claim 12 has been amended to more clearly define the subject matter which Applicants regard as the invention. Accordingly, withdrawal of this aspect of the rejection is respectfully requested.

Response to Claim Rejections Under §§102 and 103

(a) Claims 1, 3 and 5 have been rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 3,662,906 to Christensen;

(b) Claims 1 and 5 have been rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 1,964,363 to Ostling et al.;

(c) Claims 2, 7 and 10 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Christensen, and further in view of U.S. Patent No. 3,951,484 to Bowman, Jr.;

(d) Claim 8 has been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Christensen taken in view of Bowman, and further in view of and U.S. Patent No. 3,590,744 to Galloway et al.;

(e) Claim 9 has been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Christensen taken in view of Bowman, and further in view of U.S. Patent No. 4,664,036 to Hajcak, Jr.;

(f) Claims 2, 7, 10 and 12 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Ostling and further in view of Bowman; and

(g) Claims 3, 4, 6 and 11 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Christensen further in view of Bowman, and further in view of at least one of U.S. Patent No. 6,758,320 to Tegel and U.S. Patent No. 3,968,869 to Stalker.

Applicants respectfully traverse the above rejections.

The present claims are directed to a method, and a device for implementing the method for driving a carriage, comprising the steps of: (i) engaging a carriage positioned on the ground side at a curved portion of an oval-shaped endless moving path consisting of inner and outer endless rails with a carrier driven along the curved portion when the carriage is driven under a guide of the rails; (ii) towing the carriage over the entire length of the curved portion by the

carrier; and (iii), wherein the carriage is engaged with the carrier in a state where the carriage is positioned and locked on the ground side, then the carriage is unlocked and towed over the entire length of the curved portion by the carrier, and subsequently the carriage is again positioned and locked on the ground side and is disengaged from the carrier.

According to the present invention, the carriage can be smoothly and securely transferred to a carrier, or the like, at all times. See paragraph [0018].

The Examiner asserts that “[t]o additionally include carriage locking/positioning means (e.g. pins) that operate from the ground side and operate cooperatively with the feed pins, would have been obvious in view of Tegel and Stalker which evidence it to be known and desirable to be able to accurately locate a carriage moving among workstations, this conventionally including use of pins that operate from the ground side to engage the carriage for accurate location thereof - only the expected and predictable results would have been achieved.”

Applicants disagree.

Tegel and Stalker merely disclose that a carriage is in a state where the carriage is engaged with the carrier by an engagement pin, and which engagement pin is disengaged to release the carriage when the carriage arrives at a station. Neither of Tegel nor Stalker disclose or suggest the presently claimed features *“the carriage is engaged with the carrier in a state where the carriage is positioned and locked on the ground side, then the carriage is unlocked and towed over the entire length of the curved portion by the carrier, and subsequently the carriage is again positioned and locked on the ground side and the carriage is disengaged from the carrier.”*

In this regard, even if one skilled in the art were to combine the cited references the presently claimed invention would not be obtained and as such, the advantageous effect of a

carriage that can be smoothly and securely transferred to a carrier or the like at all times would not be achieved.

Thus, Christensen, Ostling Bowman, Galloway, Hajcak, Tegel and Stalker, either alone or in combination, fail anticipate or render obvious the present claims. Accordingly, withdrawal of the rejections is respectfully requested.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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